REALIZING THE EMPIRE STATE BUILDING

We can use this modified English bond technique to begin realizing the 1:230 scale model of the Empire State Building we discussed in Chapter 2. In order to accommodate the pattern of window and wall segments on the building’s facade, we’ll need to work primarily with bricks that are 1 stud thick, for a total wall thickness of 2 studs. Alternating the orientation of bricks between the layers will be necessary to lock in the structure.

To recap, we established in Chapter 2 that each individual window or wall segment should be 1 stud wide, and that each floor of the model should be 2 bricks high. A close look at the actual Empire State Building indicates that the windows occupy about half the height of each floor, so we’ll say that just the first layer of bricks in a floor (the odd layer) will feature windows; the second (even) layer will be a continuous horizontal wall.

LAYING OUT EACH FLOOR

Given that each window needs to be 1 stud wide and 1 brick high, we can’t use dedicated LEGO window pieces like we did for the basic house from Chapter 2. We instead need to use regular bricks in a transparent color, preferably without bottom tubes for maximum transparency. Specifically, we’ll use 1×2 trans-brown bricks placed crosswise so the windows will be transparent all the way through the wall. (This gives us the option to add internal lighting to the model if desired.) The wall segments between the windows in this layer can be made with 1×2 tan bricks, also placed crosswise, along with the occasional 1×1 or 2×2 brick at the corners. The full plan for the odd layer of each floor is shown on the left of Figure 3-9.

In keeping with the alternating orientations technique, we’ll design the even layer of each floor to have longer (1×3, 1×4, 1×6) tan bricks placed lengthwise in two rows, as shown on the right of Figure 3-9. Staggering the joints between the two rows ensures there won’t be any vertically aligned joints running through the entire thickness of the wall.

GETTING THE WINDOWS RIGHT

We’ve created a plan for the two layers of each floor of the Empire State Building, but if we start stacking a few floors, we’ll see that something doesn’t look right (see Figure 3-10).

OFFSETTING VERTICAL JOINTS

With the shorter dark bluish gray pieces taking the place of longer tan pieces in the outer row of the non-window layers, there are now lots of vertically aligned joints on the outer surface of the building. Thankfully, we still have the second (inner) row of lengthwise bricks to help strap everything together. The joints in this inner row should be arranged to align as little as possible with the joints in the outer row. But no matter what, we’ll end up with a few places where the joints line up between the rows (see Figure 3-12).